Washington Aviation System Plan Update

Aviation Planning Council Recommendations

Washington State Transportation Commission

John Sibold
WSDOT Aviation Director
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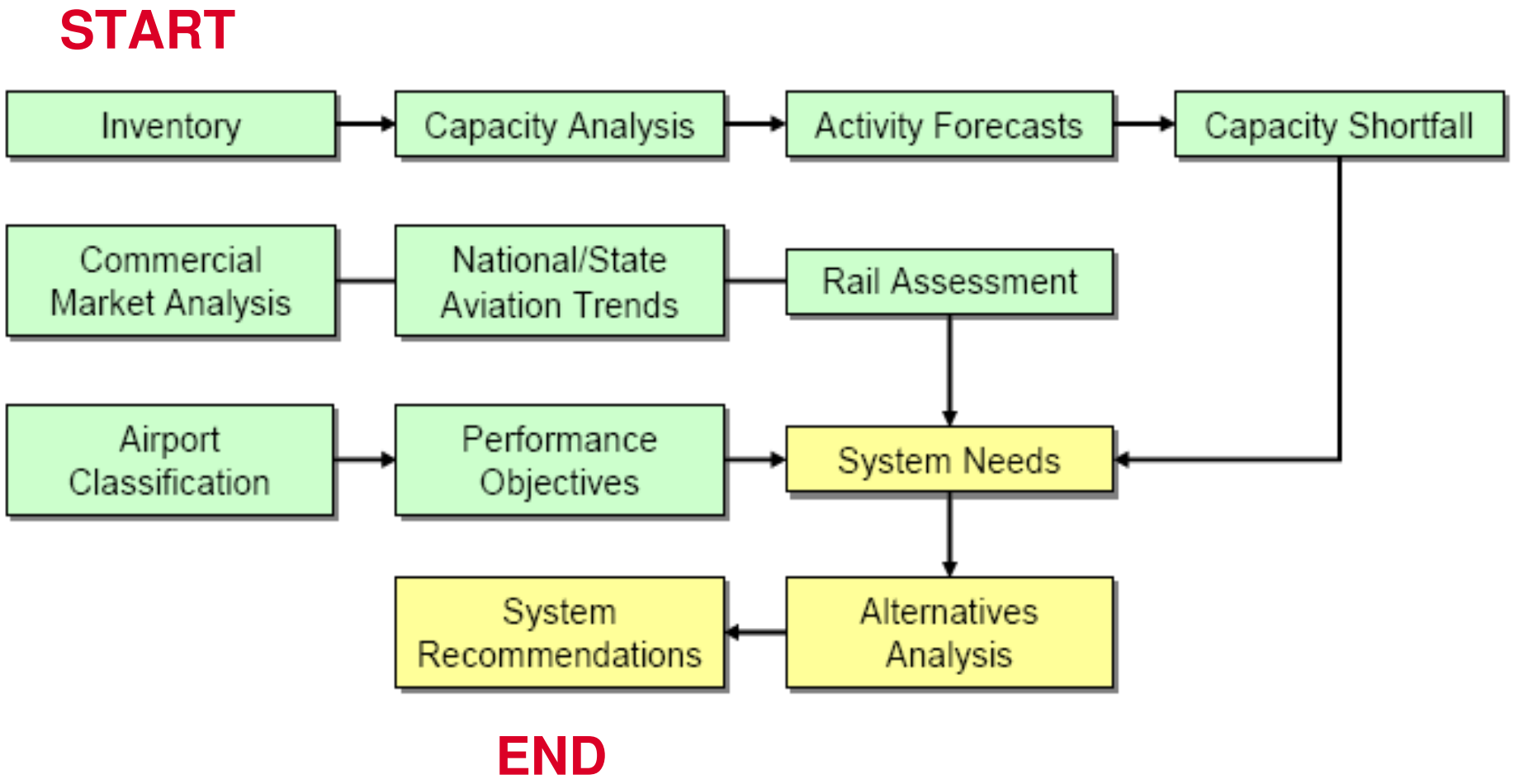
Washington State Department of Transportation

Aviation System Background

RCW 47.06.060
Aviation plan.

The state-interest component of the statewide multimodal transportation plan shall include an aviation plan, which shall fulfill the statewide aviation planning requirements of the federal government, coordinate statewide aviation planning, and identify the program needs for public use and state airports.

Washington State Aviation System Plan Components

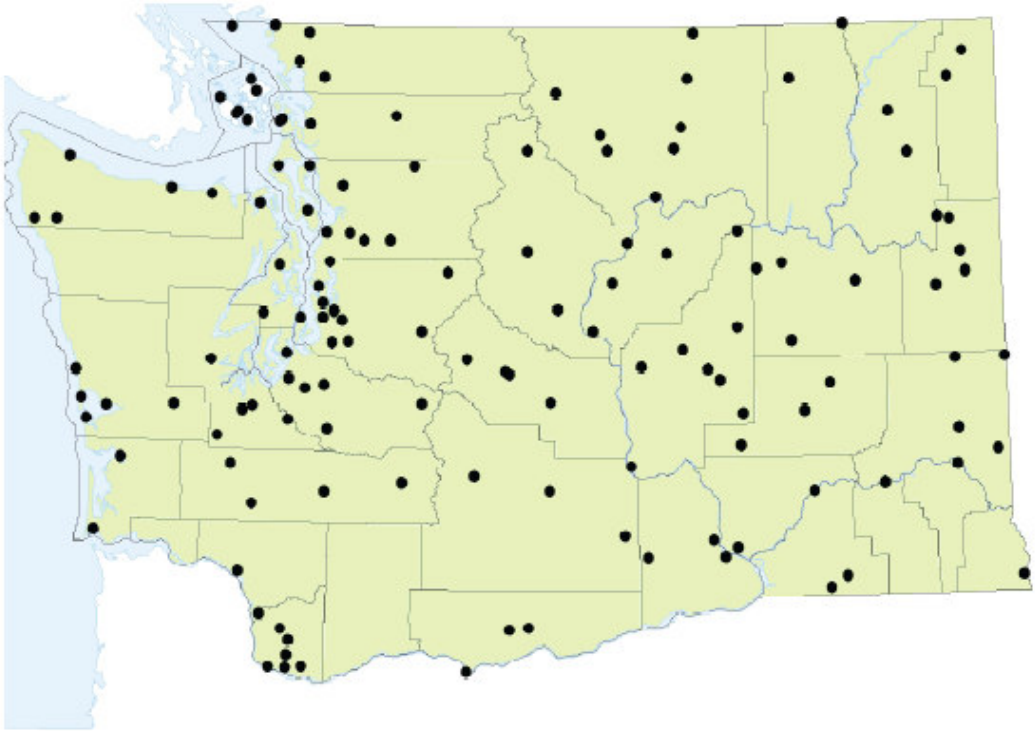


Washington State Aviation System

- 138 public use airports in 2009

- 65 airports included in National Plan of Integrated Airport Systems (NPIAS)

- Ownership:
  - WSDOT - 17
  - County - 10
  - City/Town – 43
  - Port District - 33
  - Joint - 5
  - Private - 30



Aviation System

- Washington has one of the most dynamic aviation systems in our nation
  - Every year, over 17 million enplaning passengers… 3.7 million aircraft landings/departures… more than 600,000 tons of air cargo…
  - 171,000 jobs, $4.1 million in wages, and $18.6 billion in total output
- Need for long-range aviation planning in Washington
  - Population in Washington has doubled in the last 30 years and will increase by an additional 2.5 million by 2030
  - Other challenges include limited funding, concentration of activity in key regions, local land use conflicts, and a fluctuating economy

In 2005, the Governor authorized the Washington State Long-Term Air Transportation Study (LATS) through transportation bill ESSB 5121

Three Phase Approach to LATS

Phase I: What we have.	Phase II: What we need.	Phase III: How we meet the needs.
Airport inventory, capacity and airspace assessment.	25 year commercial service market forecast, air cargo forecast, high speed passenger rail assessment; future capacity analysis, system requirements.	Governor appointed planning council to provide recommendations for future airport strategy and investment statewide.
Completed September 2006.	*Completed July 2007.*	*To be completed July 2009.*

Washington State Activity Forecast *2005 data*

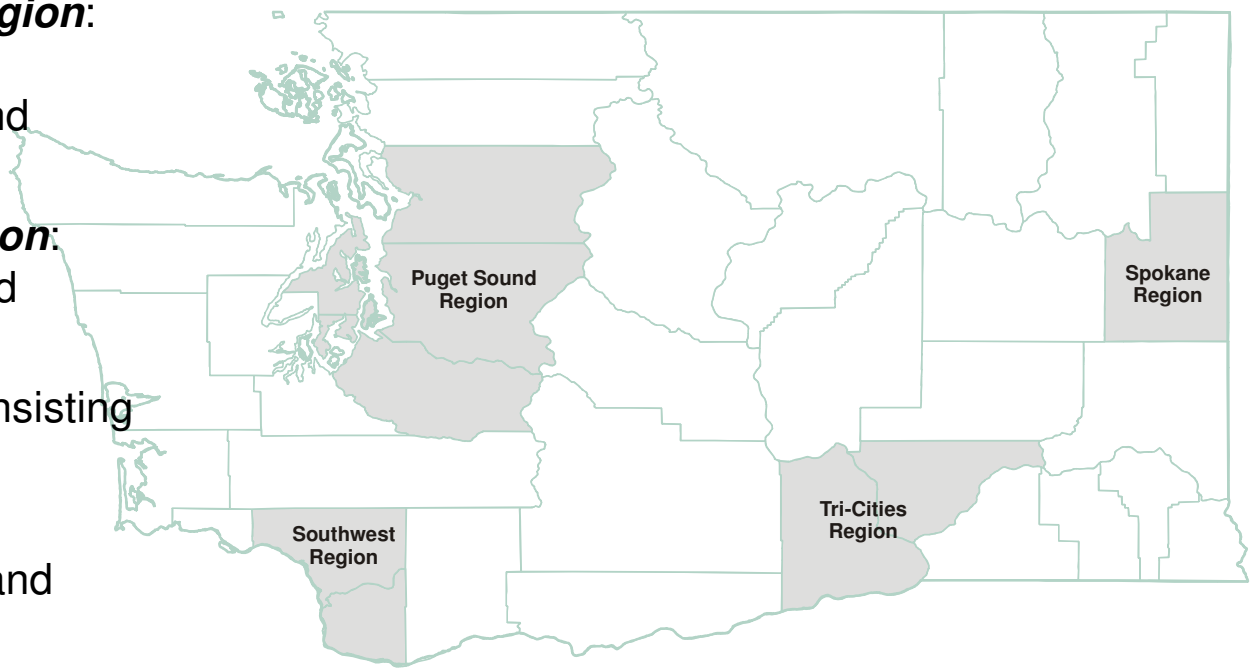
Forecasts identify expected demand in commercial passenger traffic, general aviation activity, and air cargo volume in Washington through 2030…

ACTIVITY	2005	2030	GROWTH
Passenger Enplanements	**16.5 million**	**31.3 million**	**90% increase / 2.6% per year**
Commercial operations	**670,000**	**1,110,000**	**66% increase / 2.1% per year**
GA operations	**3.0 million**	**4.4 million**	**45% increase / 1.6% per year**
GA based aircraft	**8,100**	**11,800**	**45% increase / 1.5% per year**
Air Cargo Volume	**600,000 tons**	**1,407,000 tons**	**135% increase / 3.5% per year**

Special Emphasis Regions

- The Washington State Legislature designated four geographic areas as warranting more detailed analysis than the remainder of the state because they constitute key centers of population, employment and economic activity.

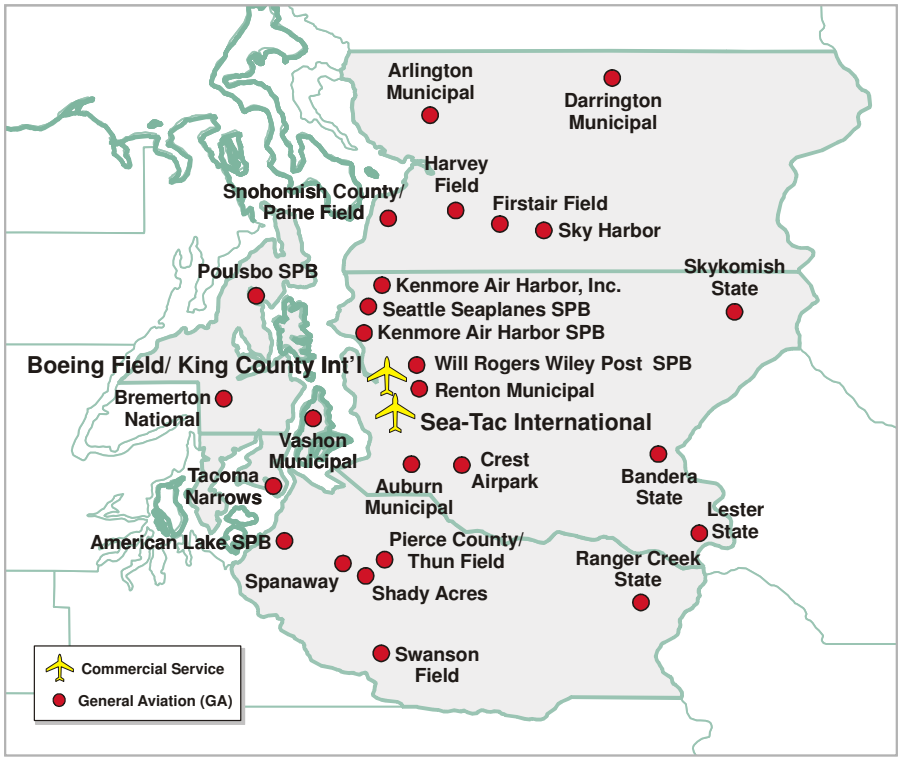
– ***The Puget Sound Region***: Consisting of King, Snohomish, Pierce, and Kitsap Counties.
– ***Southwest Washington***: Consisting of Clark and Cowlitz Counties.
– ***Spokane Region***: Consisting of Spokane County.
– ***The Tri-Cities area***: Consisting of Benton and Franklin Counties.



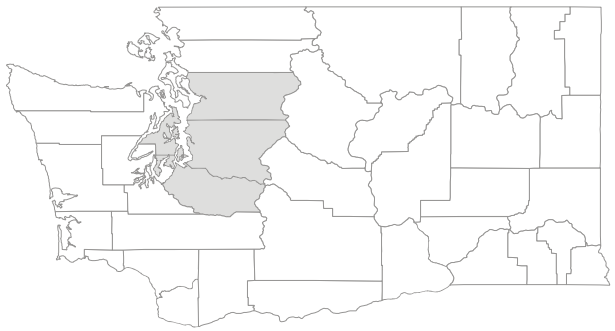
Puget Sound Special Emphasis Region

The Puget Sound Region represents the most populated region in Washington State and the busiest aviation area

- Total population of 3.5 million (approx. 55% of total Washington population)
- In 2005, the Puget Sound Region accounted for:
  - 14.3 million annual enplanements (87% of the 16.5 million total annual enplanements reported in the entire state)
  - 49% of total operations in the state
  - 47% of Washington's total GA based aircraft.
  - 83% of state's air cargo tonnage



Puget Sound Special Emphasis Region (Ctd.)



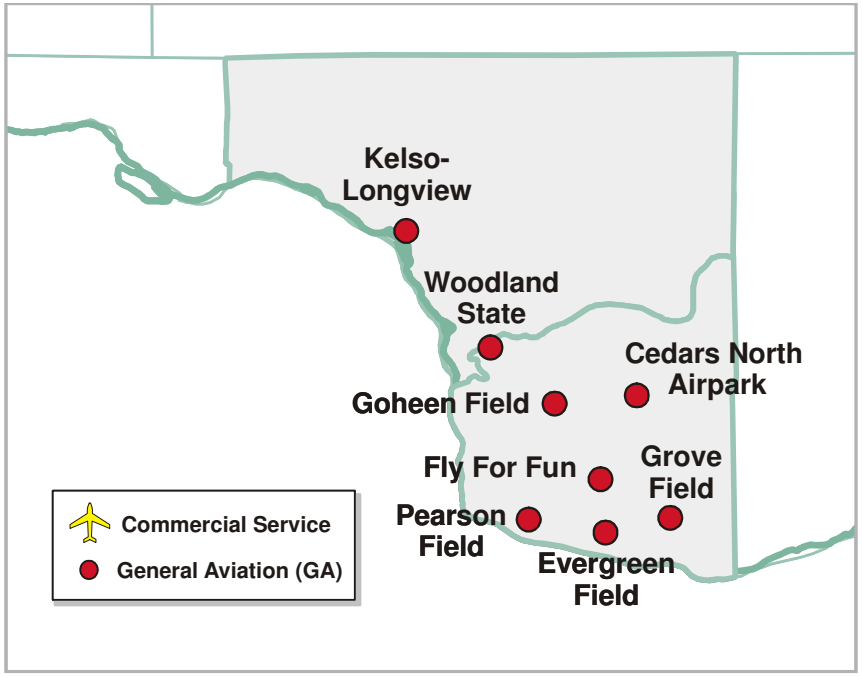
- Nine airports within the Puget Sound Special Emphasis Area are expected to exceed or approach their operations capacity by 2030
  - Four airports will exceed capacity completely: Seattle-Tacoma International, Boeing Field/King County International, Harvey Field, and Kenmore Air Harbor, Inc.

- Recent trends at Sea-Tac International including higher passenger load factors and an “upgauging” of aircraft size indicate that the airport may now reach its capacity limits beyond 2030…
- Ten airports (more than a third of the total airports in the region) are expected to approach or exceed aircraft storage capacity by 2030.
- Seattle-Tacoma International and Boeing Field may have potential operational conflict due to airspace overlap. Their proximity implies that flight path coordination between the two airports is required.

Southwest Washington Special Emphasis Region

The Southwest Region is one of the fastest growing regions in the state in terms of based aircraft and GA operations

- Total population of 500,000
- Four of the eight airports in this region are privately owned
  - These airports face significant land use encroachment issues
  - Evergreen Field closed in 2006 due to competing land uses
- Of the four publicly owned airports, two airports have limited ability to expand
  - Woodland State Airport and Pearson Airport are both unable to expand in the future



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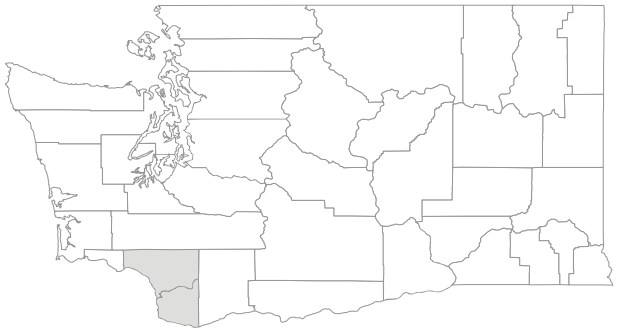


- In the early 1990's the FAA was working with Clark County officials to locate/build an new airport north of the City of Vancouver along the I-5 corridor. The project was never constructed due to significant opposition by the public.

- Capacity and demand within the Southwest Region is complicated by the fact that the dominant airport for the region is located in Oregon
  - Portland International Airport (PDX), located just south of the region across the Columbia River, provides all passenger and cargo service for the region
  - Additionally, three active GA facilities located within Oregon and controlled by the Port of Portland provide capacity for GA growth in the Southwest Region
- Five out of eight airports in the region are expected to approach or exceed aircraft storage capacity by 2030.

Spokane Special Emphasis Region

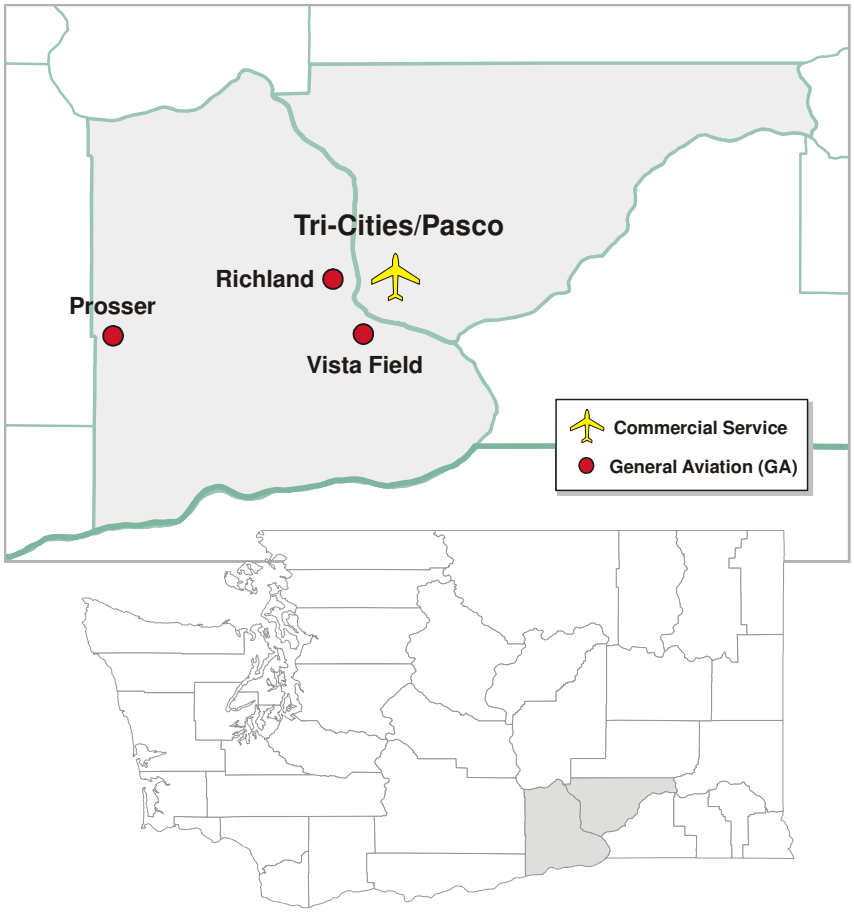
The Spokane Region accounts for the second largest concentration of commercial and GA activity in the state after the Puget Sound Region

- Total population of 440,000
- In 2005, Spokane accounted for:
  - 7.1 percent of statewide based aircraft
  - 9.4 percent of statewide enplanements
  - 16 percent of state's air cargo tonnage
- Three airports in the Spokane Region are expected to be at or exceeding aircraft storage capacity by 2030

Tri-Cities Special Emphasis Region

Land use encroachment and alternative land use make the airports in the Tri-Cities region vulnerable to closure

- Total population of 220,000
- The TriCities Region has four public use airports.
  - Tri-Cities is the third busiest commercial airport in the state after Sea-Tac and Spokane
  - Three airports are located within 20 miles of each other and include Pasco, Richland and Vista Field.
- Vista Field may be closed in the future due to alternative land use
  - Question of whether there is sufficient capacity at the remaining airports to accommodate demand is yet to be answered



Other Regions of the State

Other regions in Washington outside of the Special Emphasis Regions also have a dynamic history in aviation and present both challenges and opportunities in helping the state meet long-term needs

- Many small communities across Washington have lost a substantial amount of scheduled air service over the past 10-15 years. All of these communities are located outside of the four special emphasis areas.
  - Small community airports include: Walla Walla, Yakima, Wenatchee, Moses Lake, Pullman, Port Angeles, Friday Harbor, and East Sound
- In the mid 1990's, the FAA worked with Officials from the City of Colville to locate at new airport in the City of Colville. After completion of a fairly extensive environmental review process, City Official withdrew from the negotiations.
- The 14 Regional Transportation Planning Organizations (RTPO's) in Washington develop regional transportation plans.
  - RTPOs coordinate regional planning among cities, counties, port authorities, public transportation providers, WSDOT, and other agencies.

Washington State Airport Classification System

- LATS established a state airport classification system to identify the role of each airport in the system and determine the types of facilities and services necessary at each.
- Factors considered include runway length, based aircraft, economic impact, population served, and service area driving time.
- Six classifications are used in the Washington State airport classification system:
  - Commercial Service Airports
  - Regional Service Airports
  - Community Service Airports
  - Local Service Airports
  - Rural Essential Airports
  - Seaplane Bases

State Airport Classification

The state airport classification system was developed to identify the role of each airport in the state system and to understand the types of facilities and services necessary at each…

Classification	No. of Airports	Description
Commercial Service	16	Accommodates at least 2,500 scheduled passenger boardings per year for at least three years.
Regional Service	19	Serves large or multiple communities; all NPIAS Relievers; 40 based aircraft and 4,000-foot long runway, with exceptions
Community Service	23	Serves a community; at least 20 based aircraft; paved runway
Local Service	33	Serves a community; fewer than 20 based aircraft; paved runway
Recreation or Remote	39	Other land-based airports, including residential airparks
Seaplane Bases	9	Identified by FAA as a seaplane base, unless it is a Commercial Service Airport

Performance Objectives

- Performance objectives set targets for each classification level
- Targets investment based on classification to stretch resources
- Two types of performance objectives are proposed:
  - 1) Those that relate to all classifications
  - 2) Those that are customized for the facilities and services appropriate to each classification

Capacity Analysis

- Measures the ability of existing airport facilities to accommodate existing activity, as well as expected future activity
- The LATS capacity analysis examined five elements of aviation system capacity:
  - ***Airfield Capacity:*** the ability of an airport's runway system to accommodate take-offs and landings without experiencing delays.
  - ***Commercial Airline Passengers:*** the ability of an airport terminal to accommodate airline passengers with adequate space for ticketing, security, etc.
  - ***Air Cargo:*** the ability of an airport to accommodate processing of air cargo tonnage using existing facilities.
  - ***Aircraft Storage and Parking:*** the ability of an airport to accommodate storage of based and transient GA aircraft in tie-downs and hangars.
  - ***Airspace System:*** the ability of available airspace to safely accommodate aircraft in transit between airports.

Airfield Capacity

- Four Washington airports are anticipated to exceed 100 percent of their operating capacity by 2030:
  - Seattle-Tacoma International
  - Boeing Field
  - Harvey Field
  - Kenmore Air Harbor Inc.
- Eight additional state airports were identified as exceeding the 60 percent capacity planning threshold – the activity level at which planning should commence for adding capacity – by 2030. These airports include:
  - Arlington Municipal, Auburn Municipal, Snohomish County/Paine Field, Crest Airpark, Friday Harbor, Spokane International, and Olympia
- Significant operations capacity constraints in the Puget Sound Region
  - Nine of the twelve airports expected to exceed or approach their operations capacity by 2030 within the Puget Sound Region

Passenger Terminal Capacity

- Six airports either currently exceed or are expected to exceed their peak hour passenger capacity by 2030:
  - Anacortes
  - Kenmore Air Harbor, Inc.
  - Kenmore Air Harbor Seaplane Base
  - Orcas Island
  - Seattle-Tacoma International
  - Tri-Cities
- With the exception of Seattle-Tacoma International, the passenger terminal expansions required are not significant and may be accommodated within the existing airport footprint.
- Four additional airports are forecast to exceed the 60 percent threshold at which planning for facility expansion should begin.
  - These four airports include: Pangborn Memorial, Friday Harbor, Pullman/Moscow Regional, and Spokane International
  - Bellingham International is also operating above its capacity due to recent service increases that occurred since 2006

Aircraft Storage Capacity

- Aircraft parking and storage is generally constructed “on demand” – that is, tiedown positions and aircraft hangars are typically only constructed as the demand occurs.
- Approximately one-quarter (36 of 139) of Washington State airports are expected to have capacity shortfalls by 2030.

Air Cargo Capacity

- Over 98 percent of statewide cargo tonnage is processed through three facilities:
  - Seattle-Tacoma International
  - Boeing Field/King County International
  - Spokane International Airport
- General statewide air cargo findings:
  - Air cargo companies build facilities when / where they are needed.
  - Facility expansion occurs as demand grows.
  - Excess capacity seldom exists.
  - Key factors influencing future growth include market demand, geographic location and apron/land availability.
  - Availability of off-airport properties for cargo processing facilities provide a way around limitations on developable land at airports.

Airspace Capacity

- No significant airspace overlaps occur outside of the Four Special Emphasis Regions.
- The majority of overlaps occur in the Puget Sound Special Emphasis Region where population and aviation activity is highest
  - Seattle-Tacoma International Airport (SEA) and Boeing Field/King County International Airport (BFI) show the biggest airspace overlap in terms of potential operational conflict. As such, their proximity implies that flight path coordination between the two airports is required.
- Airspace within Washington State is subject to overlap from airports outside of the state. More specifically, airports in Southwest Washington are affected by Portland International Airport.
- Further study of airspace capacity and available technologies is needed to address future demand anticipated for the Central Puget Sound area. Such a study would fall under the purview of the FAA.

Highlights of Council Key Findings (LATS)

- No immediate capacity constraint exists at any airport in Washington State today.
- Future capacity constraints will exist within the time frame of this study (2030), primarily in the Puget Sound Region.
- Washington's aviation system is threatened by encroachment from land uses that are incompatible with aviation operations, and existing land use laws are inadequate.
- The State must continue to monitor air transportation capacity utilization and market conditions through the periodic update of the Aviation System Plan, Aviation Forecast, and Airport Facility Performance Objectives.

Highlights of Council Recommendations (LATS)

- The State should place a priority of protecting and maximizing the efficiency of the airport system we already have in place before we consider the development of new airports.
- Decisions about the placement or expansion of airports must be primarily a regional and market-driven decision.
- The State role as a steward of the aviation system includes providing adequate land use protections, recommending system improvements, as well as strategic investments to support and maintain critical aviation facilities throughout the state.
- If it is determined, at some time in the future, that future demand cannot be met at nearby airports and there is no interested sponsor to undertake such a study effort, the State should undertake siting studies for new airports.